THE FILTER

TBAS . . . Since 1992

March 2017
Volume 26 Issue 8

Photo Mike Jacobs . . . 2016

Puntigrus tetrazona
Blushing Tiger Barb

March Meeting

Speaker: Andri Nikkiforoo
KILLIFISH

March Bowl Show

1) Tetras, Barbs, Rasbora
2) Cichlids

TAMPA BAY AQUARIUM SOCIETY

"THE FILTER"

Tampa/St. Pete, Florida

TBAS

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TBAS

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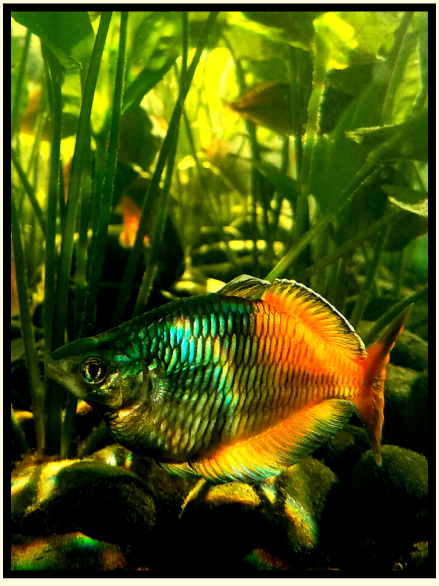
President's Dharmesh Patel Stuff

Hello friends!

I hope February was good to you all. I am looking forward to Spring! What a great time to get outdoors, collecting or even just enjoying the beautiful gift of nature.

In February I attended the First Florida Aquarium Swap in Lakeland. There were some really cool fish and hobby related items. There were also some excellent speakers, particularly our very own Bill Shields. It was great to meet many of our friends and make a few more. After the overall success of this event, I am truly looking forward to it for next year.



Our March speaker is Andri Nikkiforoo. He will be giving a presentation on Killifish. All you "Killi Nuts" come on out!

Be on the lookout for the date for our Tampa Bay Swap Meet.

See you at our next meeting!

Dharmesh

Dharmesh Patel, President, TBAS

Take a look at the photo . . . "RAINBOW ON A RAINBOW" . . . See it? . . . taken by our President Dharmesh Patel. VERY NIFTY!!!

Let's Talk SALT Again!!!

by Mike Jacobs

Over the last 3-4 months I have been asked about Salt and tropical fish by several people . . . they are confused as to what happens and they want to know. Fish stores are saying one thing and hobbyists are saying another and just what is really going on?

Ok . . . let me try to help. Remember, I started keeping tropical fish in maybe 1950 . . . this problem of putting salt in a freshwater tank was **NEVER** an issue way back then. No one ever used salt in their freshwater aquarium except for maybe the odd person that would use it for medication but then they would get it promptly out of the tank in hours . . . maybe a day. The stores I bought from way back then NEVER used salt . . . **EVER**.

The problem is OSMOSIS . . . Osmoregulation! You have probably heard of that in one of your old chemistry classes but basically it is this "A process by which molecules of a solvent tend to pass through a semipermeable membrane from a less concentrated solution into a more concentrated one, thus equalizing the concentrations on each side of the membrane." Freshwater tropical fish do this every moment of their lives . . . through their gills. Freshwater tropical fish try to maintain the density of their body fluids compared to the outside water they are in and I repeat . . . they do it through their gills. However, a freshwater tropical fish's body is HYPEROSMOTIC (MORE "stuff") to the surrounding water and their body is set up to MAINTAIN THAT BALANCE . . . that's how a freshwater fish's body works. That's not speculation, or my interpretation . . . that's how it works. That means that the body fluids in the fish contain more "elements" than the water does and the fish's body works hard to **maintain** that HYPEROSMOTIC

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STATE through the influx of water through the gill cells.

Ok . . . what am I talking about . . . let's say you get a fish from someone who's water conductivity is 4000 uS (microseimens) and you put the fish in your water that is 500 uS . . . that's a disaster! What happens is you are putting the fish into a SUPER HYPO-OSMOTIC solution (way lower "stuff") compared to what it's been living in. The fish's body goes into total overdrive and tries to correct the situation in the body . . . to make the body less hypertonic than it was in the high salt content water . . . and there is the problem, depending on the how high the concentration of salt the fish was in you have a major happening going on. There must be an INFLUX of water big time into the body of the fish. The gill cells are very delicate and can handle only so much influx into the gill cells at a time. The gill cells start immediately taking in water and when the cell takes in too much water it quickly it BURSTS . . . THE GILL CELL JUST FLAT BURSTS . . . and if too many of the gill cells burst then the fish is going to experience breathing problems and the game is all but over.

Steve Rybicki says "A cell (Ed: gill cell) placed into a hypotonic solution will have water rush inside of it (where solutes are more concentrated) and cause the cell to burst." Steve is describing what I just told you about.

When you take a fish from a HIGH "salt" concentration (hypertonic), of say NaCl, and put them into water with a much lower salt concentration, say NaCl, the fish goes into trauma trying to make the body not as HYPEROSMOTIC as it used to be and there is an influx of water into the gills . . . the gill cell(s) START BURSTING!! The cells of the fish want to be HYPEROSMOTIC to the water but not as much as it was in the BIG TIME SALT ADDED WATER so the water will infuse **INTO** the cells to lower the body cells solution and the gill cells will burst.

That's what you are seeing when you get a fish from someone, or a store, that has a high concentration of salt OR has never changed water for months and months and months (increase in conductivity) and you get fish and take them home and dump them in your nice clean lower conductivity water. The new fish TRIES TO MAKE ITS BODY LESS HYPEROSMOTIC than it was in the old water. After a few minutes or so the fish will start heavy breathing and gasping for air at the top of the water and in a matter of 2-10 days they are gone depending on the conductivity of the water they came

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from and the amount of bursting gill cells.

How can you avoid this Osmoregulation problem? It's really very easy . . . a Conductivity meter and TIME! What do I mean? When you bring home a fish from ANYWHERE use your conductivity meter and if the water they were in has a reading that is drastically higher than yours, you need to spend some time "bringing the fish down". It's really not hard and people will differ on the times involved but you will need to add say ¼ of your lower conductivity water to the new fish . . . and again and again and again . . . for maybe 5-6-7+ hours depending on the difference in the conductivity of your water and the water the fish came in. Generally if the conductivity is twice or more than mine I will for sure take 24-48 hours to acclimate them to my water. I have heard some numbers thrown around like if the conductivity reading is less than twice your conductivity then it's not really a problem . . . just take your time and in 2-3-4 hours there is not a problem. If the conductivity reading is 3-4 times your reading now is the time to really take your time and spend a lot of time "bringing them down". I have never heard a scientific percent of your conductivity that was OK and how much time for this percent or the likes of those numbers . . . but, in my opinion, if you get fish and the conductivity of the water is 4-5 times your water BE CAREFUL BIG TIME!!!!! YES . . . you should have a conductivity meter at your house . . . I use it EVERY time I get fish from someone: by the way . . . what if the conductivity of the water in the bag is LESS than your water . . . that's ALMOST not a problem. The gill cells of your fish will shrivel a bit but that's not ANYTHING LIKE BURSTING CELLS . . . it's JUST ALMOST not a problem.

Ok . . . let's talk SALT (NaCl) . . . that is the most abused chemical along these lines that I know of, however that's not the only problem with getting fish from people. Some people just don't change their water for months and months and months . . . maybe they believe that their filter is good for 2 years like some filters advertise and all they do is "top" off their tank . . . which leads to the same "conductivity" problem that salt gives. Salt does have a valid use in the aquarium; although I have not used salt in my aquarium EVER . . . not since I started in 1950 (that's 67 years!!!) . . . NEVER! I recognize the PROPER use of salt but I personally have never used it . . . and I have worked in 3 fish stores in my life for a total of maybe 2-3 years and we/I NEVER EVER used salt . . . there was always a better way

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for us. I suppose if you were really, really a good steward of your fish and never gave/sold fish from a tank of yours that had salt in it and only used the salt in your tank for 24-48 (72 hours is the key time trigger here) hours then . . . OK . . . but, I've never ever use it . . . and I shipped fish using the Post Office/Fed Ex/UPS for maybe 4-5 years and my success rate was something crazy . . . maybe 98-99% good . . . and that was including the Post Office goofs!!!

Tropical fish is not just a hobby with me . . . it's a way of life. I don't want to hurt anyone but the way rumors get started in the aquarium hobby is absolutely unbelievable and crazy. Since 1950 or so I have seen many, many, many old tropical fish "wives' tales" hit the skids . . . and that's a good thing! Maybe someday we can whip this "Salt Thing".

YouTube and OSMOREGULATION

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It seems that after I have had a light fixture for a while I begin to have problems with the lights. I have both fluorescent and incandescent light fixtures and sometimes the fluorescent bulbs take a long time to come on and the incandescent bulbs begin to blow out more frequently than normal.

Thinking that the bulbs in the fluorescent fixtures where getting weak I changed them. This did not help the light to come on any faster but the lighting was much brighter. I was worried that a new ballast would be the only way to fix the problem, until I talked to some lighting experts. It seems that the problem might be corrosion on the bulb contacts. There are several products sold at electronics stores for cleaning electrical contacts. It took two treatments on one set of bulbs, all the others were fixed with one treatment. I now make this a part of my regular maintenance work on the tanks.

I went back to talk to the same experts about the incandescent bulbs that where blowing out frequently, perhaps I had bought a bad shipment of bulbs. I was also having a hard time getting the bulbs out of the socket. I even broke one bulb trying to get it out. Well it seems that this is also a corrosion problem, but it needs a different solution. I sprayed the screw end with a little WD-40 and then screwed the bulbs in. The WD-40 keep moisture out, which keep the bulbs from blowing out so often and it made replacing the bulbs really easy.

I hope these tips will help you troubleshoot lighting problems that are not as simple as changing the bulb and use these tips to prevent future problems. Until next month, keep those fish happy and healthy.

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A.K.A. Convention 2017

May 26th – 28th

Crowne Plaza - Chicago Northbrook
2875 N. Milwaukee Avenue
Northbrook, IL 60062

Dalton Nielsen
Brazil
Collecting and Maintaining
the Killifish of Brazil

Jan Willem Hoetmer
The Netherlands
Collecting and Raising Killifish

Jack Heller
Rainy Season Collecting Trip
to the Peruvian Amazon

Ron Harlan
Collecting Killifish in Bolivia

Richard Pierce
Killifish of Madagascar

Also:

A Huge Fish Show with killifish from all over the world

Saturday Morning Killifish Sale

Saturday Evening Banquet and Awards Program

Giant Sunday Auction with hundreds of pairs of killifish
available including many rare and seldom seen species

For more information email: convention@aka.org,
watch our web site or follow us on Facebook

www.aka.org

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***Aulonocara sp.* Firefish - Dragon Blood Peacock Cichlid**

photo: Mike Jacobs 2017

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MONTHLY BOWL SHOW

January
1)
2) None - Plant Auction

February
1) Male Betta Splenden
(single fish)
2) Open

March
1) Tetras, Barbs, Rasbora
2) Cichlids

April
1) Platies
2) Guppies

May
No Bowl Show
Swap Meet

June
1) Corydoras
2) Anabantoids no Bettas

July
1) Arts & Crafts (hand made)
2) Fish "T" Shirt (must be worn)
3) Aquatic Photos
(personally taken)

August
1) Mollies
2) Rainbows

September
1) Swordtails
2) Pleco/Sucker type fish

October
1) Dwarf Cichilds
2) Angelfish

November
1) Goldfish & Koi
2) Invertebrates (Fresh or Salt)

December
No Bowl Show . . . Christmas Party and the 2016 Results of the Bowl Show!!!

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Bowl Show Results 2016

by AL

NAME	JAN	FEBRUARY	TOTAL
Kent Sheets	0	14	14
Elaine Thyner	0	6	6
Ethan Skidmore	0	5	5
Missina Burcaw	0	5	5
Danielle Lee	0	4	4

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TBAS SWAP MEET - MAY MEETING

May 8, 2017

Start Getting Your "Gizmos" Ready!!!!

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Supporters of TBAS

Tampa Bay Wholesalers: Tropical Fish

alphabetical order

1) 5D Tropical Fish
2) Segrest Farms

Tampa Bay Tropical Fish Farmers:

alphabetical order

1) Amazon Exotics
2) BioAquatix
3) Carter's Fish Hatchery
4) FishEye Aquatics
5) Golden Pond
6) Imperial Tropicals
7) Lile's Tropical Fish
8) V-W Tropicals

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MARINELAND

Tetra

COBALT AQUATICS

SAVE YOUR FISH
ZOOMED AQUATIC

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MEMBERSHIP DUES!!!!

Membership Dues for TBAS are due on the anniversary of your sign-up date every year. Please make sure you check the "sign-in" list on the table at every meeting to check your "Dues-Date" . . . Thanks!!!

USE PAYPAL ON THE TBAS WEBSITE . . . TBAS1.COM . . . !!!!!

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TAMPA BAY AQUARIUM SOCIETY OFFICERS

PRESIDENT
Dharmesh Patel

V. PRESIDENT
Bill Little

SECRETARY
Kryssi Damico

TREASURER
Patty Moncrief

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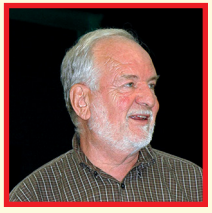
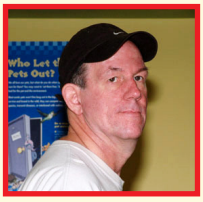


Hank Darin

Joe Gargas

Mike Jacobs

Bill Shields



Al Starkey

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Tampa Bay Aquarium Society
St. Pete/Tampa, Florida

Website: www.tbas1.com

FORUM: www.tbas1.com/forum

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